STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION BID TO THE DEPARTMENT OF TRANSPORTATION DES-OE-0102.1 (REV. 3/2011)



contract no. 03 - 250104	CONTRACT	vo. 03	- 250104
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NAME OF BIDDER Chilotti Construction Company, Inc.						
BUSINESS P.O. BOX	BUSINESS P.O. BOX NA					
CITY, STATE, ZIP Santa Rosa, CA 95407						
BUSINESS STREET ADDRESS 246 Ghilotti Ave.						
	unta Rosa CA 93to7 (Include even if P.O. Box used)					
CITY, STATE, ZIP	1111 FESG, CA 75701					
TELEPHONE NO:	AREA CODE (707) 585-1221					
FAX NO:	AREA CODE (70) 585-1601					
CONTRACTOR LICENSE NO. 644515						

 Bidder agrees, if this bid is accepted, to enter into a contract with the Department, in the form included in the Standard Specifications, to perform the work provided in the Contract under the terms of the Contract for the price or prices bid.

For a lump sum or unit price based bid, Bidder additionally agrees to perform the work within the number of working days shown on the *Notice to Bidders*.

For a cost plus time based bid on a contract without a plant establishment period, Bidder additionally agrees to perform the work within the number of working days bid.

For a cost plus time based bid on a contract with a plant establishment period, Bidder additionally agrees to perform the non–plant establishment work within the number of working days bid for non–plant establishment work.

- 2. For a lump sum based bid, Bidder submits this bid with a total price in the total bid space provided on the Bid Item List. For a unit price or cost plus time based bid, Bidder submits this bid with a unit price and the item total (the product of the unit price and the quantity) for each item and a total price (the sum of the item totals) in the spaces provided on the attached Bid Item List. For a unit price with additive item based bid, Bidder submits this bid with a unit price and an item total for each item and a total base bid (the sum of the item totals) and the additive items in the spaces provided on the attached Bid Item List. Additionally, for a cost plus time based bid, Bidder submits this bid with working days bid for non-plant establishment work, total bid for time, and total bid for bid comparison in the spaces provided on the Bid Item List. Bidder agrees:
 - 2.1. If a discrepancy between the unit price and the item total exists, the unit price prevails except:
 - 2.1.1. If the unit price is illegible, omitted, or the same as the item total, item total prevails and the unit price is the quotient of the item total and the quantity.
 - 2.1.2. If a decimal error is apparent in the product of the unit price and the quantity, the Department will use either the unit price or item total based on the closest by percentage to the unit price or item total in the Department's Final Estimate.
 - 2.2. If the unit price and the item total are illegible or are omitted, the bid may be determined nonresponsive. If a lump sum total price is illegible or is omitted, the bid may be determined nonresponsive.
 - 2.3. Bids on lump sum items are item totals. If a unit price for a lump sum item is entered and it differs from the item total, the item total prevails.
 - 2.4. Entries are to be expressed in dollars or decimal fractions of a dollar. Symbols such as commas and dollar signs are ignored and have no significance in establishing unit price or item total.
 - 2.5. Unit prices and item totals are interpreted by the number of digits and decimal placement. Do not round item totals or the total bid.

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

BID TO THE DEPARTMENT OF TRANSPORTATION

DES-OE-0102.1 (REV. 3/2011)

	2.6. For a lump sum based bid, the item total is the bid amount the Department uses for bid comparison.								
		For a unit price based bid comparison.	For a unit price based bid, the sum of the item totals is the bid amount the Department uses for bid comparison.						
		For a cost plus time base Department uses for bid	ed bid, the sum of the i comparison.	tem totals and the total	al bid for time is the bid amount the				
	2.7.	The Department's decision	on on the bid amount is	s final.					
3.	Bido	ler has and acknowledges	the following addenda	C]					
4.	Bidd	ler submits this bid with on	e of the following form	s of bidder's security	equal to at least 10 percent of the bid:				
	Cas	h\$,	Cashiers Check,	Certified Check,	Bidder's Bond				
5.	Bidd certi	ler's signature is an affirma fication may result in one o	ation of the included ce or more of the following	rtifications. Bidder is g:	cautioned that making a false				
	5.1.	Criminal prosecution							
	5.2.	Rejection of the bid							
	5.3.	Rescission of the award							
	5.4.	Termination of the Contra	act						
BY (Autho	(- 11 aur	Juny 1		DATE SIGNED (Do not type)				
PRINTED	NAME	AND TITLE OF PERSON SIGNING	Thomas Smit	h Estimation	ng Manager				

BID ITEM LIST

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
1	074016	CONSTRUCTION SITE MANAGEMENT	LS	LUMP SUM	LUMP SUM	
2	074017	PREPARE WATER POLLUTION CONTROL PROGRAM	LS	LUMP SUM	LUMP SUM	
3	074032	TEMPORARY CONCRETE WASHOUT FACILITY	EA	1		
4	074038	TEMPORARY DRAINAGE INLET PROTECTION	EA	22		
5	120090	CONSTRUCTION AREA SIGNS	LS	LUMP SUM	LUMP SUM	
6	120100	TRAFFIC CONTROL SYSTEM	LS	LUMP SUM	LUMP SUM	
7	128650	PORTABLE CHANGEABLE MESSAGE SIGN	LS	LUMP SUM	LUMP SUM	
8	150662	REMOVE METAL BEAM GUARD RAILING	L	2,500		
9	150771	REMOVE ASPHALT CONCRETE DIKE	J.F	22,900		
10	150857	REMOVE ASPHALT CONCREVE SURFACING	SQFT	338		
11	151572	RECONSTRUCT METAL BEAM GUARD RAILING	LF	1,090		
12	152500	ADJUST METAL BEAM GUARD RAILING	LF	10,400		
13	153103	COLD PLANE ASPHALT CONCRETE PAVEMENT	SQYD	360,000		
14	190101	ROADWAY EXCAVATION	CY	3,000		
15	190110	LEAD COMPLIANCE PLAN	LS	LUMP SUM	LUMP SUM	
16	198007	IMPORTED MATERIAL (SHOULDER BACKING)	TON	4,640		
17	021915	WEED CONTROL MAT (FIBER)	SQYD	6,610		
18	260210	AGGREGATE BASE (APPROACH SLAB)	CY	12		
19	374207	CRACK TREATMENT	LNMI	47		-
20	390132	HOT MIX ASPHALT (TYPE A)	TON	4,170		

BID ITEM LIST

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Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
1	074016	CONSTRUCTION SITE MANAGEMENT	LS	LUMP SUM	LUMP SUM	2000-
2	074017	PREPARE WATER POLLUTION CONTROL PROGRAM	LS	LUMP SUM	LUMP SUM	1000-
3	074032	TEMPORARY CONCRETE WASHOUT FACILITY	EA	1	1500-	1500-
4	074038	TEMPORARY DRAINAGE INLET PROTECTION	EA	22	200	4400-
5	120090	CONSTRUCTION AREA SIGNS.	LS	LUMP SUM	LUMP SUM	8000
6	120100	TRAFFIC CONTROL SYSTEM	LS	LUMP SUM	LUMP SUM	577000 577000
7	128650	PORTABLE CHANGEABLE MESSAGE SIGN	LS	LUMP SUM	LUMP SUM	12000-
8	150662	REMOVE METAL BEAM GUARD RAILING	LF	2,500	6-	15000-
9	150771	REMOVE ASPHALT CONCRETE DIKE	LF	22,900	1-	22900-
10	150857	REMOVE ASPHALT CONCRETE SURFACING	SQFT	9,126	1.50	13689-
11	151572	RECONSTRUCT METAL BEAM GUARD RAILING	LF	1,090	14-	15260-
12	152500	ADJUST METAL BEAM GUARD RAILING	LF	10,400	4-	41600-
13	153103	COLD PLANE ASPHALT CONCRETE PAVEMENT	SQYD	360,000	1.25	450000
14	190101	ROADWAY EXCAVATION	CY	3,000	35-	105000-
15	190110	LEAD COMPLIANCE PLAN	LS	LUMP SUM	LUMP SUM	1500-
16	198007	IMPORTED MATERIAL (SHOULDER BACKING)	TON	4,640	23	106720
17	021915	WEED CONTROL MAT (FIBER)	SQYD	6,610	35 -	231350
18	260210	AGGREGATE BASE (APPROACH SLAB)	CY	12	50-	600-
19	374207	CRACK TREATMENT	LNMI	47	2760-	126900-
20	390132	HOT MIX ASPHALT (TYPE A)	TON	4,170	88-	366960

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
21	390137	RUBBERIZED HOT MIX ASPHALT (GAP GRADED)	TON	70,800	87-	6159600
22	390138	RUBBERIZED HOT MIX ASPHALT (OPEN GRADED)	TON	33,200	80-	2656000
23	394050	RUMBLE STRIP	STA	2,550	20-	51000-
24	394060	DATA CORE	LS	LUMP SUM	LUMP SUM	5000-
25	394074	PLACE HOT MIX ASPHALT DIKE (TYPE C)	LF	570	1-	570-
26	394076	PLACE HOT MIX ASPHALT DIKE (TYPE E)	LF	7,310	1-	7310-
27	394077	PLACE HOT MIX ASPHALT DIKE (TYPE F)	LF	15,100	1.60	24160-
28	397005	TACK COAT	TON	210	775-	162750
29	510087	STRUCTURAL CONCRETE, APPROACH SLAB (TYPE R)	CY	116	900-	104400-
30	510502	MINOR CONCRETE (MINOR STRUCTURE)	CY	6	5500-	33000-
31	510800	PAVING NOTCH EXTENSION	CF	76	60-	4560-
32	519088	JOINT SEAL (MR 1")	LF	153	30-	4590-
33	820107	DELINEATOR (CLASS 1)	EA	230	30-	6900-
34	820151	OBJECT MARKER (TYPE L-1)	EA	6	40-	240-
35	832003	METAL BEAM GUARD RAILING (WOOD POST)	LF	2,020	18-	36360-
36	839541	TRANSITION RAILING (TYPE WB)	EA	6	3500	21000-
37	839576	END CAP (TYPE A)	EA	2	150-	300-
38	839584	ALTERNATIVE IN-LINE TERMINAL SYSTEM	EA	7	2250-	15750-
39	839585	ALTERNATIVE FLARED TERMINAL SYSTEM	EA	6	1900-	11400-
40	840504	4" THERMOPLASTIC TRAFFIC STRIPE	LF	257,000	40	102800-

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
41	840506	8" THERMOPLASTIC TRAFFIC STRIPE	LF	13,800	.75	10350-
42	840508	8" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 12-3)	LF	1,470	.70	1029-
43	840525	4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 36-12)	LF	126,000	20	25200-
44	840526	4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 17-7)	LF	1,290	.20	258-
45	850111	PAVEMENT MARKER (RETROREFLECTIVE)	EA	6,010	3-	18030-
46	860090	MAINTAINING EXISTING TRAFFIC MANAGEMENT SYSTEM ELEMENTS DURING CONSTRUCTION	LS	LUMP SUM	LUMP SUM	500-
47	021916	REPLACE LOOP DETECTORS	LS	LUMP SUM	LUMP SUM	30 000-
48	021917	MODIFY AUTOMATIC VEHICLE CLASSIFICATION SYSTEM	LS	LUMP SUM	LUMP SUM	30000-
49	999990	MOBILIZATION	LS	LUMP SUM	LUMP SUM	1250000

TOTAL BID FOR ITEMS:

\$12876436

TOTAL BID FOR TIME:

= s 618000-20 X \$30,900.00 WORKING DAYS BID COST PER DAY

(Not to exceed 90 Days)

TOTAL BID FOR COMPARISON (COST PLUS TIME): \$ 13 494 436



Chilotti Construction Company

246 Ghilotti Avenue, Santa Rosa, CA 95407 Ph: (707) 585-1221 Fax: (707) 585-1601 WWW.GHILOTTI.COM

FAX COVER SHEET

<u>To:</u>	Department of Transportation	From:	Thomas Smith	
Company:	Department of Transportation	Pages:	2 (Including Cover)	
FAX #:	(916) 227 – 6282	Date:	11/9/11	
Re:	Subcontractor percentages – Project No. 03-2F0104	CC:		

As required, following is the completed Subcontractor Listing form for project No. 03-2F0104 including percentages of each bid item subcontracted.

Please contact me if you need further information.

Thomas Smith

rhank you,

Ghilotti Construction Company, Inc.

(707) 585 - 1221

This message is intended for the use of the individual or entity to which it is addressed and may contain information that is privileged, confidential and exempt from disclosure under applicable law. If you are not the intended recipient, you are hereby notified that any use, dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone, and return this original message to us at the above address via the U.S. Postal Service.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

SUBCONTRACTOR LIST

DES-OE-0102.2 (REV 2/2010)

Bidder Name: Ghilotti Construction Company, Inc.

The bidder must identify each subcontractor performing work in an amount in excess of 1/2 of 1 percent of the total bid or \$10,000, whichever is greater (Pub Cont Code § 4100 et seq.). Complete columns 1 and 4 and submit with the bid. Complete columns 2 and 3 and submit with the bid or fax to (916) 227-6282 within 24 hours after the bid opening. Failure to provide complete information in columns 1 through 4 within the time specified will result in a non-responsive bid.

Column 1: Business Name and Location	Column 2: Bid Item No.(s)	Column 3: Percent of Bid Item Subcontracted	Column 4: Description of Subcontracted Work
S.T. RHOADES CONSTRUCTION REDDING, CA	19	100%	CRACK SEAL
PACIFIC EXCAVATION	46	100%	ELECTRICAL
ELK GROVE, CA	47	100%	
	48	100%	
МВТ	8	100%	MBGR
STOCKTON, CA	11	100%	in the state of th
	12	100%	
	17	100%	
	30	70%	
	35	100%	
	36	100%	
	37	100%	
	38	100%	
	39	100%	
LINEAR OPTIONS	40	100%	STRIPING
MENLO PARK, CA	41	100%	
State control of the	42	100%	10 m
	43	100%	
	44	100%	
2	45	100%	
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DES-OE-0102.2 (REV 3/2011)

GHILOTTI CONSTRUCTION COMPANY Bidder Name:

The bidder must identify each subcontractor performing work in an amount in excess of 1/2 of 1 percent of the total bid or \$10,000, whichever is greater (Pub Cont Code § 4100 et seq.). Complete columns 1 and 4 and submit with the bid. Complete columns 2 and 3 and submit with the bid or fax to (916) 227-6282 within 24 hours after the bid opening. Failure to provide complete information in columns 1 through 4 within the time specified will result in a nonresponsive bid.

Column 1: Business Name and Location	Column 2: Bid Item Nos.	Column 3: Percentage of Bid Item Subcontracted	Column 4: Description of Subcontracted Work
5.T. RHOADES CONSTRUCTION OF S.T. RHOADES CONSTRUCTION REDDING, CA.			CRACK SEAL
PACIFIC EXCAVATION INC.			ELECTRICAL
MIDSTATE BARRIER INC., STOCKTON, CA			MBGR
LINEAR OPTIONS INC. MENLO PARK, CA			STRIPING



STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION SUBCONTRACTOR LIST

DES-OE-0102.2 (REV 3/2011)

GHILOTTI Bidder Name:	CONSTRUCTION	COMPANY

The bidder must identify each subcontractor performing work in an amount in excess of 1/2 of 1 percent of the total bid or \$10,000, whichever is greater (Pub Cont Code § 4100 et seq.). Complete columns 1 and 4 and submit with the bid. Complete columns 2 and 3 and submit with the bid or fax to (916) 227-6282 within 24 hours after the bid opening. Failure to provide complete information in columns 1 through 4 within the time specified will result in a nonresponsive bid.

Column 1: Business Name and Location	Column 2: Bid Item Nos.	Column 3: Percentage of Bid Item Subcontracted	Column 4: Description of Subcontracted Work
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STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

SUBCONTRACTOR LIST

DES-OE-0102.2 (REV 3/2011)

GHILOTTI	CONSTRUCTION	COMPANY
Ridder Name		

The bidder must identify each subcontractor performing work in an amount in excess of 1/2 of 1 percent of the total bid or \$10,000, whichever is greater (Pub Cont Code § 4100 et seq.). Complete columns 1 and 4 and submit with the bid. Complete columns 2 and 3 and submit with the bid or fax to (916) 227-6282 within 24 hours after the bid opening. Failure to provide complete information in columns 1 through 4 within the time specified will result in a nonresponsive bid.

Column 1: Business Name and Location	Column 2: Bid Item Nos.	Column 3: Percentage of Bid Item Subcontracted	Column 4: Description of Subcontracted Work	
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SUBCONTRACTOR LIST

DES-OE-0102.2 (REV 3/2011)

Biddor	HILOTTI	CONSTRUCTION	COMPANY
Bidder i	vame:		

The bidder must identify each subcontractor performing work in an amount in excess of 1/2 of 1 percent of the total bid or \$10,000, whichever is greater (Pub Cont Code § 4100 et seq.). Complete columns 1 and 4 and submit with the bid. Complete columns 2 and 3 and submit with the bid or fax to (916) 227-6282 within 24 hours after the bid opening. Failure to provide complete information in columns 1 through 4 within the time specified will result in a nonresponsive bid.

Column 1: Business Name and Location	Column 2: Bid Item Nos.	Column 3: Percentage of Bid Item Subcontracted	Column 4: Description of Subcontracted Work
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SUBCONTRACTOR LIST

DES-OE-0102.2 (REV 3/2011)

GHILOTTI	CONSTRUCTION	COMPANY
Bloder Name:		

The bidder must identify each subcontractor performing work in an amount in excess of 1/2 of 1 percent of the total bid or \$10,000, whichever is greater (Pub Cont Code § 4100 et seq.). Complete columns 1 and 4 and submit with the bid. Complete columns 2 and 3 and submit with the bid or fax to (916) 227-6282 within 24 hours after the bid opening. Failure to provide complete information in columns 1 through 4 within the time specified will result in a nonresponsive bid.

Column 1: Business Name and Location	Column 2: Bid Item Nos.	Column 3: Percentage of Bid Item Subcontracted	Column 4: Description of Subcontracted Work
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8			

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

SUBCONTRACTOR LIST

DES-OE-0102.2 (REV 3/2011)

GHILOTTI	CONSTRUCTION	COMPANY
Blader Name:		

The bidder must identify each subcontractor performing work in an amount in excess of 1/2 of 1 percent of the total bid or \$10,000, whichever is greater (Pub Cont Code § 4100 et seq.). Complete columns 1 and 4 and submit with the bid. Complete columns 2 and 3 and submit with the bid or fax to (916) 227-6282 within 24 hours after the bid opening. Failure to provide complete information in columns 1 through 4 within the time specified will result in a nonresponsive bid.

Column 1: Business Name and Location	Column 2: Bid Item Nos.	Column 3: Percentage of Bid Item Subcontracted	Column 4: Description of Subcontracted Work	2
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STATE OF CALIFORNIA - DEPARTMENT OF BIDDER'S BOND	TRANSPORTATION Contract No. 03-2F0104
DES-OE-0102.3 (REV 3/2008)	Bond No. N/A
we Ghilotti Construct	ion Company, Inc.
	as Principal, and
Safeco Insurance Company	of America
ten percent (10%) of the total amount of t of which sum we bind ourselves, jointly a	g -
	E CONDITION OF THIS OBLIGATION IS SUCH, THAT:
	oid to the Obligee, for Construction on State Highway in Yolo County In and Near (Copy here the exect description of work, including location, as it appears on the proposal)
Woodland From 0.3 Mile West of Sa	acramento River Bridge to 0.2 Mile North of Adams Creek Bridge, 03-Yol-5-0.3/R14.0
for which bids are to be opened at	Sacramento, California (Insert place where bids will be opened)
	on <u>November 8, 2011</u>
otherwise, it shall remain in full force. In the event a suit is brought upo by the Obligee in such suit, including a re- Dated: October 25, 20 Correspondence or claims relating to bond should be sent to the surety at following address: 1001 Fourth Ave., Safeco Plaza Seattle, WA 98154	Ghilotti Construction Company Inching Wanage
State of California County of SEE ATTACHI	Jana B. Pilgard Attorney-in-Fact ALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT
On this before me,	<u></u>
Date	Here Insert Name and Title of the Officer
personally appeared	Name(s) of Signer(s)
and acknowledged to me that he/she/they	ory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument executed the same in his/her/their authorized capacity(ies), and that by his/her/their s), or the entity upon behalf of which the person(s) acted, executed the instrument.
I certify under PENALTY OF PERJURY un	der the laws of the State of California that the foregoing paragraph is true and correct.
	WITNESS my hand and official seal.
(SEAL)	Signature
	Signature of Notary Public

State of California)
	}
County of Onoma	
On November 7, 2011 before me, _	Laura V tridalas Motary Public
Date	Here Insert Name and Title of the Officer
personally appearedhomas	Name(s) of Signer(s)
	Hame(a) or digital(a)
	who proved to me on the basis of satisfactory
	evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged
	to me that he/she/they executed the same in
	his/her/their authorized capacity(les), and that by
LAURA V. HIDALGO	his/her/their signature(s) on the instrument the
Commission # 1805719 Notary Public - California	person(\$), or the entity upon behalf of which the person(\$) acted, executed the instrument.
Sonoma County	person by actou, executed the institution.
My Comm. Expires Jul 30, 2012	I certify under PENALTY OF PERJURY under the
	laws of the State of California that the foregoing
	paragraph is true and correct.
	WITNESS my hand and official seal.
	(M) When
	Signature: August Hags
Place Notary Seal Above	OPTIONAL Signature of Notary Public
Though the information below is not require and could prevent fraudulent rer	ed by law, it may prove valuable to persons relying on the document moval and reattachment of this form to another document.
Description of Attached Document	
Title or Type of Document:	
Document Date:	Number of Pages:
Capacity(ies) Claimed by Signer(s)	
Signer's Name:	
☐ Corporate Officer — Title(s):	
OF S	SIGNER OF SIGNER
☐ Partner — ☐ Limited ☐ General Top of t	humb here Partner — Limited General Top of thumb here Attorney in Fact
Trustee	☐ Trustee
Guardian or Conservator	☐ Guardian or Conservator
☐ Other:	☐ Other:
Signer Is Representing:	Signer Is Representing:

	ACKNOWL	EDGMEN	Т
State of California County of Placer)		
On October 25, 2011	before me,	Kathy Ran	gel, Notary Public
		(insert na	ame and title of the officer)
personally appearedJana	B. Pilgard		
who proved to me on the basis subscribed to the within instrur	of satisfactory e ment and acknow ty(ies), and that b	ledged to me by his/her/their	the person(s) whose name(s) is/are that he/she/they executed the same in r signature(s) on the instrument the ted, executed the instrument.
I certify under PENALTY OF P paragraph is true and correct.	ERJURY under t	he laws of the	e State of California that the foregoing
WITNESS my hand and officia	l seal.		KATHY RANGEL COMM. #1828903 NOTARY PUBLIC • CALIFORNIA 9
Signature Kathy	meel	(Seal)	PLACER COUNTY Commission Expires January 27, 2013

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

SAFECO INSURANCE COMPANY OF AMERICA SEATTLE, WASHINGTON POWER OF ATTORNEY

urety and as its act and deed, any and all under THREE HUNDRED MILLION AND 00/100** ***	rue and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as ertakings, bonds, recognizances and other surety obligations in the penal sum not exceeding *** DOLLARS (\$ 300,000,000.00**************************
hat this power is made and executed pursuant to and b	by authority of the following By-law and Authorization:
as the Chairman or the President may prescrib execute, seal, acknowledge and deliver as su fact, subject to the limitations set forth in the	12. Surety Bonds and Undertakings. authorized for that purpose in writing by the Chairman or the President, and subject to such limitations be, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, urety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-terrespective powers of attorney, shall have full power to bind the Corporation by their signature and as if signed by the president and attested by the secretary.
y the following instrument the chairman or the presid	dent has authorized the officer or other official named therein to appoint attorneys-in-fact:
Pursuant to Article IV, Section 12 of the By-la appoint such attorneys-in-fact as may be nec any and all undertakings, bonds, recognizand	aws, Garnet W. Elliott, Assistant Secretary of Safeco Insurance Company of America, is authorized to cessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety ces and other surety obligations. The true copies thereof and are now in full force and effect.
hat the By-law and the Authorization set forth above a	re true copies thereof and are now in full force and effect.
	been subscribed by an authorized officer or official of the Company and the corporate seal of dithereto in Plymouth Meeting, Pennsylvania this 27th day of April,
OOMMONIWEALTH OF PENNOVIVANIA	SAFECO INSURANCE COMPANY OF AMERICA By Garnet W. Elliott, Assistant Secretary A. 2011 , before me, a Notary Public, personally came Garnet W. Elliott, to me known, and Safeco Insurance Company of America; that he knows the seal of said corporation; and that he he corporate seal of Safeco Insurance Company of America thereto with the authority and at the led my name and affixed my notarial seal at Plymouth Meeting, Pennsylvania, on the day and year
COMMONWEALTH OF PENNSYLVANIA ss	
OUNTY OF MONTGOMERY	

> Notarial Seal Teresa Pastella, Notary Public Plymouth Twp., Montgomery County My Commission Expires Mar. 28, 2013

CERTIFICATE

OF

I, the undersigned, Assistant Secretary of Safeco Insurance Company of America, do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy, is in full force and effect on the date of this certificate; and I do further certify that the officer or official who executed the said power of attorney is an Assistant Secretary specially authorized by the chairman or the president to appoint attorneys-in-fact as provided in Article IV, Section 12 of the By-laws of Safeco Insurance Company of America.

This certificate and the above power of attorney may be signed by facsimile or mechanically reproduced signatures under and by authority of the following vote of the board of directors of Safeco Insurance Company of America at a meeting duly called and held on the 18th day of September, 2009.

VOTED that the facsimile or mechanically reproduced signature of any assistant secretary of the company, wherever appearing upon a certified copy of any power of attorney issued by the company in connection with surety bonds, shall be valid and binding upon the company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seal of the said company, this day of October , 2011.

David M. Carey, Assistant Secretary

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

OPT OUT OF PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS

NA

DES-OE-0102.12 (NEW 12/2009)

Adjustments for Price Index F	ent adjustments for price index fluctuations as specified in "Payment luctuations" of the special provisions. If you elect to opt out of the i, complete this form and submit it with your bid.
Bidder Name:	CONTRACT NO
	adjustments for price index fluctuations.
Date:	Signature:

SMALL BUSINESS STATUS

DES-OE-0102.4 (REV 3/2008)

	CONTRACT NO. 03 - 2FO104
Are you certified as a "Small Business" by the Office of General Services of the State of California? Check on	f Small Business and DVBE Services of the Department of ie:
Yes: Certification number?	No
Note: This small business questionnaire is included for	r statistical reporting only.

CERTIFICATIONS

FEDERAL-AID PROJECTS DISCLOSURE OF LOBBYING ACTIVITIES CERTIFICATION

Bidder certifies, to the best of his or her knowledge and belief:

- 1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- 2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form LLL, "Disclosure of Lobbying Activities," in conformance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 USC § 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Bidder also agrees by submitting a bid that it must require the language of this certification be included in subcontracts over \$100,000 and these subcontractors shall certify and disclose.

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

- 1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence, the outcome of a covered Federal action.
- 2. Identify the status of the covered Federal action.
- Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last, previously submitted report by this reporting entity for this covered Federal action.
- 4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
- 5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
- Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
- Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
- 8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
- 9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitments for the prime entity identified in item 4 or 5.
- 10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.
 - (b) Enter the full names of the individual(s) performing services and include full address if different from 10(a). Enter Last Name, First Name, and Middle Initial (MI).
- 11. The certifying official shall sign and date the form, print his/her name title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503.

DISCLOSURE OF LOBBYING ACTIVITIES

Approved by OMB 0348-0046

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352

1. Type of Federal Action:	2. Status of Federal Action:		3. Report Type:	
a. contract	a. bid/offer/application		a. initial	
b. grant	b. initial award		b. material change	
c. cooperative agreement	c. post-awar	d	For Material Change Only:	
d. loan			year quarter	
e. loan guarantee			date of last report	
f. loan insurance				
4. Name and Address of Reporting Ent	ity:	5. If Reporting En Name and Address	tity in No. 4 is Subawardee Enter	
☐ Prime ☐ Subaware	dee	Traine and Hadres	, 0	
Tier, if known				
Congressional District, if known:		Congressiona	District, if known:	
			3.0	
6. Federal Department/Agency:		7. Federal Program	n Name/Description:	
		CFDA Number,	if applicable	
8. Federal Action Number, if known:		9. Award Amount,	if known:	
		\$		
10 a. Name and Address of Lobby Regi	strant	b. Individuals Peri different from No.	forming Services (including address if	
(if individual, last name, first no	ame, MI):		, first name, MI):	
	22 82	50 50		
NO LOBBYING	ACTIVITIES	5/1		
140 50.313701	, (0 , 1 , 1 , 1		X	
			Vaux Juil	
11. Information requested through this form is author Section 1352. This disclosure of lobbying activities is a n		Signature:	Thomas Smith	
fact upon which reliance was placed by the tier above w made or entered into. This disclosure is required pursua	hen this transaction was	Print Name:		
This information will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than		上S Title:	timating Manager	
\$10,000 and not more than \$100,000 for each such failure.		Telephone No.: (707) 585-1241 Date: 11.8.11		
		Telephone 140 (16	1) JOJ Mai Date. 11 0	
Federal Use Only:			uthorized for Local Reproduction	
		St	andard Form - LLL (Rev. 7-97)	

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UNDOCUMENTED ALIENS EMPLOYMENT

Under Pub Cont Code § 6101, the Bidder certifies compliance with state and federal law respecting the employment of undocumented aliens.

NONCOLLUSION

NONCOLLUSION AFFIDAVIT TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID
Under PCC 7106 and 23 USC 112, the bidder declares as follows:
State of California County of Sovovo
being first duly sworn, deposes and says that he or she is Estimating Manager of Chiloth Construction Co. Inc. the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.
CHILD SUPPORT COMPLIANCE ACT Under Pub Cont Code § 7110, the contractor acknowledges that: 1. The contractor recognizes the importance of child and family support obligations and shall fully comply with all applicable state and federal laws relating to child and family support enforcement, including, but not limited to, disclosure of information and compliance with earnings assignment orders, as provided in Chapter 8 (commencing with section 5200) of Part 5 of Division 9 of the Family Code; and 2. The contractor to the best of its knowledge is fully complying with the earnings assignment orders of all employees and is providing the names of all new employees to the New Hire Registry maintained by the Employment Development Department.
VIOLATION OF LAW OR A SAFETY REGULATION
Under Pub Cont Code § 10162, the Bidder must complete, under penalty of perjury, the following questionnaire:
Has the Bidder, any officer of the Bidder, or any employee of the Bidder who has a proprietary interest in the Bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or a safety regulation?
Yes No If the answer is yes, explain the circumstances in the following space.
NA

NATIONAL LABOR RELATIONS BOARD

Under Pub Cont Code § 10232, the contractor, swears under penalty of perjury, that no more than one final unappealable finding of contempt of court by a federal court has been issued against the contractor within the immediately preceding two year period because of the contractor's failure to comply with an order of a federal court which orders the contractor to comply with an order of the National Labor Relations Board.

AN	ITITRUST LAW	
the Bidd section, antitrus Pub Co Univers officer, 10285.1 If the B	der has has not hindling any charge of fraud taw in connection with the bit had code § 1101, with any put hit of California or the Trustees director, responsible managing.	Bidder declares under penalty of perjury under the laws of the State of California that been convicted within the preceding three years of any offenses referred to in that , bribery, collusion, conspiracy, or any other act in violation of any state or federal dding upon, award of, or performance of, any public works contract, as defined in ublic entity, as defined in Pub Cont Code § 1100, including the Regents of the coff the California State University. The term "Bidder" includes any partner, member, ag officer, or responsible managing employee thereof, as referred to in Section of offense within the past 3 years, provide the conviction details including the date ion in the space below.
		MA
ВІ	DDER RESPONSIBILITY Q	UESTIONNAIRE
Failure complet	to truthfully answer the following, under penalty of perjury, the	ng questions will result in a finding that the bid is nonresponsive. The Bidder must following questionnaire:
1.	federal, State, local, or region	the Bidder been found to be a nonresponsible bidder by any public entity, including al entities?
2.	Within the past 10 years, have	re any of the Bidder's officers or employees with a proprietary interest in the Bidder on the proprietary interest in the Bidder on the proprietary interest in the Bidder on the Bidder of the Bidder
3.	Is there any officer or emplo company that bid or bids on p bidder by any public entity, inc	byee of the Bidder who now has or has had any proprietary interest in another bublic works projects whose company has been determined to be a nonresponsible cluding federal, State, local, or regional entities?
4.		No preceding questions is yes, disclose all pertinent details of the determination of ibility determination
	 Name of each public age who would have informati 	noncy issuing the nonresponsibility determination and a contact person at that agency ion about the determination

END CERTIFICATIONS



Corporate Resolution to Execute Proposals

Resolved that this Corporation, Ghilotti Construction Company, hereby approves and appoints Richard W. Ghilotti, President of Ghilotti Construction Company, Brian Ongaro, Vice President of Ghilotti Construction Company, Ali Yazdi, VP, General Manager of Ghilotti Construction Company, Stacy L. Magill, Secretary of Ghilotti Construction Company, and Tom Smith, Estimating Manager of Ghilotti Construction Company for the purpose of executing in the name of this corporation, any and all bid documents and Bidder's Bonds.

Resolved further, that any and all actions taken by Richard W. Ghilotti, Brian Ongaro, Ali Yazdi, Stacy L. Magill and Tom Smith in executing said bid documents and Bidder's Bonds be, and they hereby are, ratified and approved, and all such Proposals and bonds and documents are hereby adopted as binding obligations of this corporation.

I, Stacy L. Magill, Secretary of Ghilotti Construction Company, a corporation incorporated under the laws of the State of California, do hereby certify that the foregoing is a full, true and correct copy of resolutions of the Board of Directors of the said corporation, duly and regularly passed and adopted at a special meeting of the Board of Directors of the said corporation which was duly and regularly called and held in all respects as required by law, and by the bylaws of the said corporation, at the office thereof on the 2nd day of November, 2004, at which special meeting a majority of the board of Directors of the said corporations was present and voted in favor of said resolutions.

IN WITNESS WHEREOF, I have hereto set my hand as such Secretary and affixed the corporate seal of the said corporation, this 22nd day of September, 2011.

Stacy L. Magill
Secretary

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES OFFICE ENGINEER 1727 30th Street MS-43 P.O. BOX 168041 SACRAMENTO. CA 95816-8041 FAX (916) 227-6214 TTY 711



Flex your power! Be energy efficient!

November 2, 2011

03-Yol-5-0.3/R14.0 03-2F0104 Project ID 0300020442 ACIM-0056(337)E

Addendum No. 1

Dear Contractor:

This addendum is being issued to the contract for CONSTRUCTION ON STATE HIGHWAY IN YOLO COUNTY IN AND NEAR WOODLAND FROM 0.3 MILE WEST OF SACRAMENTO RIVER BRIDGE TO 0.2 MILE NORTH OF ADAMS CREEK BRIDGE.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

Bids for this work will be opened on Tuesday, November 8, 2011.

This addendum is being issued to revise the Project Plans, the Notice to Bidders and Special Provisions, and the Bid book.

Project Plan Sheet 3 is revised. A copy of the revised sheet is attached for substitution for the like-numbered sheet.

Project Plan Sheet 36 is revised as follows: .

Plan Sheet	Sheet No.	Quantity	
COUNTRY ROAD 101 UC	36	REMOVE ASPHALT CONCRETE SURFACING	9126 SQFT

In the Special Provisions, Section 10-1.17, "EXISTING HIGHWAY FACILITIES," subsection "REMOVE ASPHALT CONCRETE SURFACING," subsection "Construction," the seventh paragraph is revised as follows:

"Remove existing asphalt concrete surfacing by cold milling. At least 1/2 inch of existing asphalt concrete surfacing must remain after cold milling activities. Remove remaining asphalt surfacing by other means approved by the Engineer. The existing concrete slab must not be damaged during removal operations."

Addendum No. 1 Page 2 November 2, 2011

03-Yol-5-0.3/R14.0 03-2F0104 Project ID 0300020442 ACIM-0056(337)E

In the Special Provisions, Section 10-1.17, "EXISTING HIGHWAY FACILITIES," subsection "REMOVE ASPHALT CONCRETE SURFACING," subsection "Measurement and Payment," the second paragraph is revised as follows:

"The contract price paid per square foot for remove asphalt concrete surfacing shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in remove asphalt concrete surfacing, complete in place, including the removal of the remaining 1/2-inch of asphalt surfacing by other means, abrasive blast cleaning, removal of all laitance, contaminants and foreign material, sweeping the deck surface and blowing the deck surface clean using high pressure air, including the removal of any material between the asphalt concrete surfacing and portland cement concrete deck, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer."

In the Special Provisions, Section 10-1.23, "RUBBERIZED HOT MIX ASPHALT (GAP GRADED)," is revised as attached.

In the Special Provisions, Section 10-1.24, "RUBBERIZED HOT MIX ASPHALT (OPEN GRADED)," is revised as attached.

In the Bid book, in the "Bid Item List," Item 10 is revised, as attached.

To Bid book holders:

Replace (the entire) page 3 of the "Bid Item List" in the Bid book with the attached revised page 3 of the Bid Item List. The revised Bid Item List is to be used in the bid.

Inquiries or questions in regard to this addendum must be communicated as a bidder inquiry and must be made as noted in the Notice to Bidders section of the Notice to Bidders and Special Provisions.

Indicate receipt of this addendum by filling in the number of this addendum in the space provided on the signature page of the Bid book.

Submit bids in the Bid book you now possess. Holders who have already mailed their book will be contacted to arrange for the return of their book.

Inform subcontractors and suppliers as necessary.

This addendum and its attachments are available for the Contractors' download on the Web site:

http://www.dot.ca.gov/hq/esc/oe/project ads addenda/03/03-2F0104

If you are not a Bid book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,

District Director

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Attachments

10-1.23 RUBBERIZED HOT MIX ASPHALT (GAP GRADED)

GENERAL

Summary

This work includes producing and placing rubberized hot mix asphalt (gap graded) (RHMA-G) using the Quality Control / Quality Assurance process with warm mix asphalt technologies. Warm mix asphalt technologies are defined as additives or processes that allow for a reduction in the temperature at which asphalt mixtures are produced and placed.

Comply with Section 39, "Hot Mix Asphalt," of the Standard Specifications.

Use one of the following warm mix asphalt additives:

Product name:

Producer name:

Contact:

Phone number:

Evotherm

MeadWest Vaco Corporation Scott Dmytrow or Wade Miller

(916) 825 - 9415 or (949) 495 - 4822

Product name: Producer name:

Contact:

Phone number:

Advera

Sasobit

PQ Corporation

Annette Smith (610) 651 - 4469

Product name: Producer name:

Phone number:

Contact:

Larry Michael

(301)745 - 3334

Sasol Wax Americas, Inc.

Submittals

Submit information from producer selected about each warm mix asphalt additive used. Submit the method and location for addition of additive.

Submit samples of plant-produced loose RHMA-G with warm mix asphalt additives. The Engineer determines the quantity and time for sampling.

Submit a list of names participating in the prepaving conference. Identify each participant's name, employer, title, and role in the construction of RHMA-G with warm mix asphalt additives.

Submit the log of production data in electronic and printed media at the end of each production shift, or when requested by the Engineer. Each set of production data in electronic media must be in line feed carriage return, on one line, on a separate record, and with sufficient fields to satisfy the amount of data specified. The daily log must include:

- 1. Date of production
- 2. Time of day the data is captured
- 3. Data titles at least once per report
- 4. Aggregate size being treated
- 5. Flow rate of wet aggregate collected directly from the aggregate weigh belt
- 6. Aggregate moisture content at the time of treatment expressed as a percent of the dry aggregate
- 7. Calculated difference between the agreed warm mix asphalt additive ratio and the actual warm mix asphalt additive

Ouality Control / Quality Assurance Projects

With the job mix formula (JMF) submittal, submit:

- 1. California Test 204 plasticity index results
- 2. California Test 371 minimum dry strength results for untreated RHMA-G
- 3. California Test 371 tensile strength ratio results for untreated RHMA-G
- 4. California Test 371 minimum dry strength and tensile strength ratio results for treated RHMA-G if untreated RHMA-G tensile strength ratio is below 70
- 5. AASHTO T 324 (Modified) test results using plant produced RHMA-G

CONTRACT NO. 03-2F0104 ADDED PER ADDENDUM NO. I DATED NOVEMBER 2, 2011 At production start-up and once during production, submit samples split from your RHMA-G production sample for California Test 371 and AASHTO T324 (Modified) test to the Engineer and the Transportation Laboratory. Attention: Moisture Test.

With the JMF submittal, at production start-up, and each 10,000 tons, submit the California Test 371 test results and AASHTO T324 (Modified) test results for mix design and production to the Engineer and electronically to:

With the JMF submittal, at production start-up evaluation, and each 10,000 tons, submit 2 test specimens from AASHTO T324 (Modified) test to the Engineer.

With the JMF submittal, submit to the Engineer and the Transportation Laboratory, Attention: Moisture Test, samples for California Test 371 and AASHTO T324 (Modified) test split from your mix design samples of:

- Aggregate
- 2. Supplemental fines
- 3. Asphalt rubber binder
- 4. Antistrip treatment
- 5. Warm Mix Additive

Mix Design

Quality Control / Quality Assurance Projects

For RHMA-G using warm mix asphalt technology, for mix design, prepare RHMA-G mix samples in accordance with California Test 304, except cure samples in a forced air draft oven at 275 °F for 4 hours ± 10 minutes.

For the mix design, determine the plasticity index of the aggregate blend under California Test 204. Choose an antistrip treatment and use the corresponding laboratory procedure for the mix design in compliance with:

Antistrip Treatment Lab Procedures for Mix Design

Antistrip Treatment	Lab Procedure	
Plasticity index from 4 to 10 ^a		
Dry hydrated lime with marination	LP-6	
Lime slurry with marination	LP-7	
Plasticity index less than 4		
Liquid	LP-5	
Dry hydrated lime without marination	LP-6	
Dry hydrated lime with marination	LP-6	
Lime slurry with marination	LP-7	

Notes:

The mix design for RHMA-G must produce RHMA-G with the values for the quality characteristic shown in the following table:

HMA Mix Design Requirements

Quality characteristic	Test method	Requirement
Moisture sensitivity (minimum dry tensile strength, lb/in²)	California Test 371	150
Moisture sensitivity (tensile strength ratio, %)	California Test 371	70

For the mix design, if the tensile strength ratio is less than 70:

- Choose from the antistrip treatments specified based on plasticity index.
- 2. Test treated RHMA-G under California Test 371.
- 3. Treat to a minimum tensile strength ratio of 70.

For the mix design, determine AASHTO T 324 (Modified) on plant produced untreated RHMA-G.

CONTRACT NO. 03-2F0104 ADDED PER ADDENDUM NO. 1 DATED NOVEMBER 2, 2011

^a If the plasticity index greater than 10, do not use that aggregate blend.

AASHTO T 324 (Modified) is AASHTO T 324 "Hamburg Wheel-Track Testing of Compacted Hot Mix Asphalt (HMA)" with the following parameters:

1. Target air voids = 7+/- 1%

2. Number of test specimens = 4

3. Test specimen= 6" gyratory compacted specimen

4. Test temperature = 122 °F +/- 2°F

5. Measurements: Impression at every 100 passes

6. Inflection point1

7. Testing shut off = 20,000 passes

¹ The inflection point is defined as: The number of wheel passes at the intersection of the creep slope and the stripping slope.

The mix design for RHMA-G must produce RHMA-G when tested under AASHTO T 324 (Modified) that complies with the following requirements in Table 1 based on the performance graded (PG) asphalt binder in the RHMA-G:

Table 1
Hot Mix Asphalt Requirements

Quality characteristic	Test method	Minimum number of passes at 0.5" average rut depth	Inflection point minimum number of passes
Hamburg wheel test PG 64 or lower	AASHTO T 324	10,000	5,000
PG 70	(Modified)	15,000	7,500
PG 76 or higher		20,000	10,000

If the AASHTO T 324 (Modified) results do not meet the requirements of Table 1:

- 1. Choose from the antistrip treatments specified based on plasticity index.
- 2. Test treated plant produced RHMA-G.
- 3. Treatment chosen must produce RHMA-G with the minimum values in Table 1.

MATERIALS

Asphalt Binder

Asphalt binder mixed with asphalt modifier and crumb rubber modifier (CRM) for asphalt rubber binder must be PG 64-16.

Aggregate

The aggregate for RHMA-G must comply with the 3/4-inch grading.

Asphalt Rubber Binder Content

Determine the amount of asphalt rubber binder to be mixed with the aggregate for RHMA-G under California Test 367 except:

 Determine the specific gravity used in California Test 367, Section B, "Void Content of Specimen," using California Test 308, Method A.

- 2. California Test 367, Section C, "Optimum Bitumen Content," is revised as follows:
 - 2.1. Base the calculations on the average of 3 briquettes produced at each asphalt rubber binder content.
 - 2.2. Use California Test 309 to determine theoretical maximum specific gravity and density of the RHMA-G.
 - 2.3. Plot asphalt rubber binder content versus average air voids content based on California Test 309 for each set of three specimens on Form TL-306 (Figure 3), and connect adjacent points with a best-fit curve.
 - 2.4. Plot asphalt rubber binder content versus average Hveem stability for each set of three specimens and connect adjacent points with a best-fit curve.
 - 2.5. Calculate voids in mineral aggregate (VMA) and voids filled with asphalt (VFA) for each specimen, average each set, and plot the average versus asphalt rubber binder content.
 - 2.6. Calculate the dust proportion and plot versus asphalt rubber binder content.
 - 2.7. From the curve plotted in Step 2.3, select the theoretical asphalt rubber binder content that has 5.0 percent air voids.
 - 2.8. At the selected asphalt rubber binder content, evaluate corresponding voids in mineral aggregate, voids filled with asphalt, and dust proportion to verify compliance with requirements. If necessary, develop an alternate composite aggregate gradation to conform to the RHMA-G requirements.
 - 2.9. Record the asphalt rubber binder content in Step 2.7 as the Optimum Bitumen Content (OBC).
 - 2.10. To establish a recommended range, use the OBC as the high value and 0.3 percent less as the low value. Notwithstanding, the recommended range must not extend below 7.0 percent. If the OBC is 7.0 percent, then there is no recommended range, and 7.0 percent is the recommended value.
- 3. Laboratory mixing and compaction must comply with California Test 304, except the mixing temperature of the aggregate must be between 300 °F and 325 °F. The mixing temperature of the asphalt-rubber binder must be between 350 °F and 425 °F. The compaction temperature of the combined mixture must be between 290 °F and 300 °F.

CONTRACTOR QUALITY CONTROL

Quality Control / Quality Assurance Projects

For RHMA-G using warm mix asphalt technology, for California Test 304, prepare field samples in accordance with California Test 304, except cure samples in a forced air draft oven at 275 °F for 4 hours ± 10 minutes.

Perform sampling and testing at the specified frequency and location for the following additional quality characteristics:

Minimum Quality Control

Quality characteristic	Test - method	Minimum sampling and testing frequency	Requirement	Location of sampling	Maximum reporting time allowance
Moisture sensitivity	California Test 371	First production day and I per 10,000 tons	Report Only	Loose mix behind the paver. See California Test 125	10 working days
Hamburg wheel test ^a	AASHTO T 324 (Modified)	First production day and 1per 10,000 tons	Table I	Loose mix behind the paver. See California Test 125	48 hours ^b

Note:

^aAASHTO T 324 (Modified) is AASHTO T 324 "Hamburg Wheel-Track Testing of Compacted Hot Mix Asphalt (HMA)" with the following parameters:

- 1. Target air voids = 7+/- 1%
- 2. Number of test specimens = 4
- 3. Test specimen= 6" gyratory compacted specimen
- 4. Test temperature = 122 °F +/- 2°F
- 5. Measurements: Impression at every 100 passes
- 6. Inflection point1
- 7. Testing shut off = 20,000 passes

¹ The inflection point is defined as: The number of wheel passes at the intersection of the creep slope and the stripping slope.

^bSubmit to the Engineer within 48 hours of sampling, 2 test specimens and data for AASHTO T 324 (Modified).

The Department does not use California Test 371 test results from production to determine specification compliance.

ENGINEERS ACCEPTANCE

For RHMA-G using warm mix asphalt technology, for California Test 304, prepare field samples in accordance with California Test 304, except cure samples in a forced air draft oven at 275 °F for 4 hours \pm 10 minutes.

The Engineer samples RHMA-G for acceptance testing and tests for the following additional quality characteristic:

HMA Acceptance

Quality characteristic	Test method	Requirement	Sampling location
Hamburg wheel test ^a	AASHTO T 324 (Modified)	Table I	Loose mix behind the paver. See California Test 125

Note:

- ^a AASHTO T 324 (Modified) is AASHTO T 324 "Hamburg Wheel-Track Testing of Compacted Hot Mix Asphalt (HMA)" with the following parameters:
 - 1. Target air voids = 7+/- 1%
 - 2. Number of test specimens = 4
 - 3. Test specimen= 6" gyratory compacted specimen
 - 4. Test temperature = 122 °F +/- 2°F
 - 5. Measurements: Impression at every 100 passes
 - 6. Inflection point1
 - 7. Testing shut off = 20,000 passes
 - The inflection point is defined as: The number of wheel passes at the intersection of the creep slope and the stripping slope.

CONTRACT NO. 03-2F0104

ADDED PER ADDENDUM NO. 1 DATED NOVEMBER 2, 2011

CONSTRUCTION

General

During production, make loose RHMA-G available at the plant for sampling. The Engineer determines the quantity and time for sampling.

Prepaving conference

Discuss RHMA-G at the prepaving conference. Discuss the methods for production and placement including contingency planning and standards or workmanship.

Provide the facility for the prepaving conference. Attendees must include:

- 1. Project Manager
- 2. Superintendent
- 3. Technical representatives from each warm mix additive company
- 4. Paving subcontractors
- 5. Asphalt rubber binder supplier
- 6. Plant manager
- 7. Plant operator

Technical Representatives

A technical representative from each warm mix asphalt additive supplier must be present during the first week of production and placement of RHMA-G and thereafter be available to the Contractor as needed. The technical representative must advise you, the Engineer, and the asphalt rubber binder producer. The technical representative must direct the mix operation as it relates to the warm mix asphalt additive.

The technical representative must advise the producer regarding plant and controller modifications necessary for product delivery and proper mixing. Plant modifications must comply with Material Plant Quality Program (MPQP).

Material Plant Quality Program

Review the plant to assure compliance with weights and measures under MPQP within 30 days before production of RHMA-G.

Data Collection

The device controlling warm mix asphalt additive proportioning must produce a log of production data. The log must be a series of data captured at 1-minute intervals during production. Each 1-minute data set must register the production activity for that minute and not be a summation of the preceding minute. Each 1-minute data set represents an amount of material produced 5 minutes before and 5 minutes after the capture time. Store collected data with the plant control device while the contract is in progress.

Proportioning Warm Mix Asphalt Additives

General

Proportion warm mix asphalt additives by weight. Use either a continuous or batch type plant.

Continuous Mixing

If continuous proportioning for RHMA-G with warm mix asphalt additive is used, determine the exact ratio of warm mix asphalt additive to the total RHMA-G at the production rates to be used. Rate-of-flow indicators and totalizers for like materials must be accurate within 0.5 percent from each other. Comply with the following:

1. Weigh dry warm mix asphalt additives with a belt scale or loss in weight feeder. If operating from 30 to 100 percent of production capacity, the average difference between the indicated weight of material delivered and the actual weight delivered must not exceed 2.0 percent of the actual weight for 3 individual runs. For any of the 3 individual runs, the indicated weight of material delivered must not vary from the actual weight delivered by more than 3.0 percent of the actual weight. The platform scale's maximum capacity must not exceed 2.5 tons with a maximum graduation size of 0.10 pound. Each test run must be at least 100 pounds of warm mix asphalt additive.

2. The addition device must rest on either concrete pads and or steel plates. The steel plates must be 1.5 inch thick and be no smaller than 20 inches width and height

3. Measure emulsified warm mix asphalt additive with a meter. If operating from 50 to 100 percent of production capacity, the difference between the indicated weight of emulsion delivered and the actual weight delivered must not exceed 1.0 percent of the actual weight for 3 individual runs. Weigh tests on a platform scale located at the proportioning plant. The platform scale's maximum capacity must not exceed 2.5 tons with a maximum graduation size of 0.10 pound. Run tests for at least 300 gallons of emulsified warm mix asphalt additive.

Batch Mixing

If batch proportioning for RHMA-G with warm mix asphalt additive is used, comply with the following:

- 1. Proportion dry warm mix asphalt additives by weight. Weigh the additive at the warm mix asphalt production site with a scale appropriate for the amount of additive weighed. If batches use dry warm mix additive weighing less than 1 ton, use an automatic batch controller. Run tests for at least 100 pounds of dry warm mix asphalt additives.
- 2. Measure emulsified warm mix asphalt additive with a meter. If operating from 50 to 100 percent of production capacity, the difference between the indicated weight of emulsion delivered and the actual weight delivered must not exceed 1.0 percent of the actual weight for 3 individual runs. Weigh tests on a platform scale located at the proportioning plant. The platform scale's maximum capacity must not exceed 2.5 tons with a maximum graduation size of 0.10 pound. Run tests for at least 300 lbs of emulsified warm mix asphalt additive.
- 3. Proportioning for pre-blending the asphalt rubber binder and zeolite
 - a) Weigh dry warm mix asphalt additives with a belt scale or loss in weight feeder. If operating from 30 to 100 percent of production capacity, the average difference between the indicated weight of material delivered and the actual weight delivered must not exceed 2.0 percent of the actual weight for 3 individual runs. For any of the 3 individual runs, the indicated weight of material delivered must not vary from the actual weight delivered by more than 3.0 percent of the actual weight. The platform scale's maximum capacity must not exceed 2.5 tons with a maximum graduation size of 0.10 pound. Each test run must be at least 100 pounds of warm mix asphalt additive.

b) The addition device will rest on a smooth, level surface, either concrete pads or steel plates. The steel plates will

be 1.5 inch thick and be no smaller than 20 inches width and height.

c) The asphalt rubber binder will be measured with a mass flow meter (micromotion). The accuracy of the addition device shall be such that, when operating between 30 and 100 percent of production capacity, the average difference between the indicated weight of material delivered and the actual weight of material delivered will not exceed 1.0 percent of the actual weight for 3 individual runs. For any of the 3 individual runs, the indicated weight of material delivered shall not vary from the actual weight delivered by more than 2.0 percent of the actual weight. Test duration will be determined by the size of the flowmeter, following the CT 109 specification.

RHMA-G Production and Placement

Produce an asphalt mixture within the temperature range of 285°F and 325 °F.

For RHMA-G:

- Only spread and compact if the atmospheric temperature is at least 50 °F and the surface temperature is at least 50 °F.
- 2. Complete the first coverage of breakdown compaction before the surface temperature drops below 260 °F.
- 3. Complete breakdown and intermediate compaction before the surface temperature drops below 230 °F.
- 4. Complete finish compaction before the surface temperature drops below 180 °F.
- 5. If the atmospheric temperature is below 70 °F, cover loads in trucks with tarpaulins. The tarpaulins must completely cover the exposed load until you transfer the mixture to the payer's hopper or to the payement surface.

Material Transfer Vehicle

A material transfer vehicle (MTV) must be used. The MTV must:

- 1. Either receive HMA directly from the truck or use a pickup head to load it from a windrow that can be deposited on the roadway surface for a maximum of 100 feet in length.
- 2. Transfer HMA directly into the paver's receiving hopper or feed system
- 3. Remix the HMA, with augurs, before loading the paver
- 4. Have sufficient capacity to prevent stopping the paver

Rumble Strips

Construct shoulder rumble strips in the top layer of new RHMA-G surfacing.

Before opening the lane to public traffic, pave shoulders and median borders adjacent to a lane being paved.

Place RHMA-G on adjacent traveled way lanes so that at the end of each work shift, the distance between the ends of RHMA-G layers on adjacent lanes is between 5 feet and 10 feet. Place additional RHMA-G along the transverse edge at each lane's end and along the exposed longitudinal edges between adjacent lanes. Hand rake and compact the additional RHMA-G to form temporary conforms. You may place Kraft paper, or another approved bond breaker, under the conform tapers to facilitate the taper removal when paying operations resume.

PAYMENT

The contract price paid per ton for rubberized hot mix asphalt (gap graded) using warm mix asphalt technologies includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, including warm mix additives, prepaving conference, material transfer vehicle, data collection and testing and technical representation, and for doing all the work involved in constructing rubberized hot mix asphalt (gap graded) with warm mix asphalt additives, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

10-1.24 RUBBERIZED HOT MIX ASPHALT (OPEN GRADED)

GENERAL

Summary

This work includes producing and placing rubberized hot mix asphalt (open graded) (RHMA-O) with a warm mix asphalt additive using the Standard process.

Comply with Section 39, "Hot Mix Asphalt," of the Standard Specifications and these special provisions.

Use one of the following warm mix asphalt additives:

Product name:

Evotherm

Producer name:

Mead West Vaco Corporation

Contact:

Scott Dmytrow or Wade Miller

Phone Number:

(916) 825-9415 or (949) 495-4822

Product name:

Advera

Producer name:

PQ corporation

Contact:

Annette Smith

Phone number:

(610) 651-4469

Product name:

Sasobit

Producer name:

Sasol Wax Americas, Inc.

Contact:

Larry Michael

Phone number

(301) 745-3334

Submittals

Submit information from each producer about each warm mix asphalt additive. Submit the method and location for addition of each additive.

Submit samples of loose plant-produced RHMA- O_ with warm mix asphalt additives. The Engineer determines the

quantity and time for sampling.

Submit the log of production data on electronic and printed media at the end of each production shift, or when requested by the Engineer. Each set of production data on electronic media must be in line feed carriage return, on one line, on a separate record, and with sufficient fields to satisfy the amount of data specified. The daily log must include:

- 1. Date of production
- 2. Time of day the data is captured
- 3. Data titles at least once per report
- 4. Aggregate size being treated
- 5. Flow rate of wet aggregate collected directly from the aggregate weigh belt

6. Aggregate moisture content at the time of treatment expressed as a percent of the dry aggregate

 Calculated difference between the agreed warm mix asphalt additive ratio and the actual warm mix asphalt additive ratio

Data Cores

Three business days before starting coring, submit proposed methods and materials for backfilling data core holes. Submit to the Engineer and electronically to Coring@dot.ca.gov:

- 1. A summary of data cores taken
- 2. A photograph of each data core

CONTRACT NO. 03-2F0104 ADDED PER ADDENDUM NO. 1 DATED NOVEMBER 2, 2011 For each data core, the summary must include:

- 1. Project identification number
- 2. Date cored
- 3. Core identification number
- 4. Type of materials recovered
- 5. Type and approximate thickness of unstabilized material not recovered
- 6. Total core thickness
- 7. Thickness of each individual material to within:
 - 7.1 For recovered material, 1/2 inch
 - 7.2 For unstabilized material, 1.0 inch
- 8. Location including:
 - 8.1. County
 - 8.2. Route
 - 8.3. Post mile
 - 8.4. Lane number
 - 8.5. Lane direction
 - 8.6. Station

Each data core digital photograph must include a ruler laid next to the data core. Each photograph must include:

- 1. The core
- 2. Project identification number
- 3. Core identification number
- 4. Date cored
- 5. County
- 6. Route
- 7. Post mile
- 8. Lane number
- 9. Lane direction

After data core summary and photograph submittal, dispose of cores under Section 7-1.13, "Disposal of Material Outside the Highway Right of Way," of the Standard Specifications.

Quality Control and Assurance

Do not test RHMA-O for plasticity index and tensile strength ratio.

MATERIALS

Asphalt binder mixed with asphalt modifier and crumb rubber modifier (CRM) for asphalt rubber binder must be PG 64-

The aggregate for RHMA-O must comply with the 1/2-inch grading.

The Engineer uses the following formula to determine the optimum asphalt binder content for RHMA-O:

$$OBC_2 = (OBC_1) \times 1.40$$

where:

OBC₁ = Optimum bitumen content using the specified PG asphalt binder

under California Test 368.

OBC₂ = Optimum bitumen content using asphalt rubber binder.

Treat RHMA-O with the same anti-strip treatment used for RHMA Type G.

CONTRACT NO. 03-2F0104 ADDED PER ADDENDUM NO. 1 DATED NOVEMBER 2, 2011

CONSTRUCTION

General

During production, make loose RHMA-O_ available at the plant for sampling. The Engineer determines the quantity and time for sampling.

Prepaving Conference

Discuss RHMA-O with warm mix asphalt additive at the prepaving conference. Discuss the methods for production and placement including contingency planning and standards or workmanship.

Provide the facility for the prepaving conference. Attendees must include:

- 1. Project Manager
- 2. Superintendent
- 3. Technical representative from each WMA company
- 4. Paving subcontractor
- 5. Asphalt rubber binder supplier
- 6. Plant manager
- 7. Plant operator

Submit a list of names participating in the prepaving conference. Identify each participant's name, employer, title, and role in construction of RHMA-O with warm mix asphalt additives.

Technical Representatives

A technical representative from each warm mix asphalt additive supplier must be present during the first week of production and placement of RHMA-O and thereafter be available to the Contractor as needed. The technical representative must advise you, the Engineer, and the asphalt rubber binder producer. The technical representative must direct the mix operation as it relates to the warm mix asphalt additive.

The technical representatives must advise the plant manager and plant operator regarding plant and controller modifications necessary for product delivery and proper mixing. Plant modifications must comply with California Test 109.

Plant modifications must comply with Material Plant Quality Program (MPQP).

California Test 109

Review the plant to assure compliance with weights and measures under California Test 109 within 30 days before production of RHMA-O.

Materials Production Quality Program

Review the plant to assure compliance with the MPQP at least 15 days before production of RHMA with warm mix asphalt additives.

Data Collection

The HMA plant process-controller must produce an electronic log of production data. The log will consist of a series of snapshots captured at a maximum of 1-minute intervals throughout the period of daily production. Each snapshot of production data must be a register of production activity at that time and not a summation of the data over the preceding interval to the previous snapshot. The amount of material represented by each snapshot will be that amount produced during the 0.5 minute interval before and the 0.5 minute interval after the capture time. Collect and hold data for the duration of the contract and submit the electronic media to the Engineer, daily or upon request. The snapshot of production data must include the following:

- 1. Date of production.
- 2. Plant location
- 3. Time of day the data is captured
- 4. Mix type being produced
- 5. Temperature of the binder and RHMA mixture
- 6. For a continuous mix operation, the rate of flow of the dry aggregate calculated from the wet aggregate flow rate as determined by the conveyor scale
- 7. For a continuous mix plant operation, the rate of flow of the asphalt meter
- 8. For a continuous mix plant operation, the rate of flow of warm-mix ingredient meter
- 9. For a batch plant operation, actual batch weights of all ingredient
- 10. The aggregate/binder ratio calculated from metered ingredient output
- 11. The binder/warm-mix additive ratio calculated from metered output

Electronic media must be presented in a Comma-Separated Values (CSV) format. Captured data, for the ingredients represented by production snapshot, must have allowances for sufficient fields to satisfy the amount of data required by these specifications and include data titles at least once per report

Proportioning Warm Mix Asphalt Additives

General

Proportion all ingredients by weight. The HMA plant process-controller must be the sole source of ingredient proportioning control and be fully interfaced with all scales and meters used in the production process. Ensure that the HMA plant process-controller utilizes the warm-mix additive as an integral ingredient of the HMA mix.

Weighing and metering devices used for the production of warm-mix HMA must meet the requirements of the Material Plant Quality Program (MPQP). When a loss-in-weight meter is used it must meet the requirements of the MPQP and the following:

- 1. Include at least one complete system re-fill cycle during each calibration test run.
- 2. Operate the device in a normal run mode for 10 minutes immediately before starting the calibration process.
- 3. .Isolate the scale-system, within the loss-in-weight feeder, from surrounding vibration.
- Check the scale-system, within the loss-in-weight feeder, for accuracy before and after the calibration process and daily during mix production.
- 5. For a dry ingredient delivery rate of less than one ton per hour use a 15 minute minimum test run size.
- 6. The unit's accuracy must comply with the limits of Table B, "Conveyor Scale Testing Extremes," in the MPQP.

Dry ingredient additives for continuous production must be proportioned with a conveyor scale or a loss-in-weight meter. Dry ingredients for batch production must be proportioned with a hopper scale.

Liquid ingredient additive, including a normally dry ingredient made liquid, must be proportioned with a mass flow meter.

Produce warm-mix HMA by using either a continuous mixing or a batch type HMA plant.

Continuous Mixing

If continuous proportioning for RHMA-O with warm mix asphalt additive is used, determine the exact ratio of warm mix asphalt additive to the total RHMA-O at the production rates to be used. Rate-of-flow indicators and totalizers for like materials must be accurate within 0.5 percent from each other. Comply with the following:

1. Weigh dry warm mix asphalt additives with a belt scale or loss in weight feeder. If operating from 30 to 100 percent of production capacity, the average difference between the indicated weight of material delivered and the actual weight delivered must not exceed 1.0 percent of the actual weight for 3 individual runs. For any of the 3 individual runs, the indicated weight of material delivered must not vary from the actual weight delivered by more than 3.0 percent of the actual weight. The platform scale's maximum capacity must not exceed 2.5 tons with a maximum graduation size of 0.10 pound. Each test run must be at least 100 pounds of warm mix asphalt additive.

2. The addition device must rest on either concrete pads and or steel plates. The steel plates must be 1.5 inch thick and be no smaller than 20 inches width and height.

3. Measure emulsified warm mix asphalt additive with a meter. If operating from 50 to 100 percent of production capacity, the difference between the indicated weight of emulsion delivered and the actual weight delivered must not exceed 1.0 percent of the actual weight for 3 individual runs. Weigh tests on a platform scale located at the proportioning plant. The platform scale's maximum capacity must not exceed 2.5 tons with a maximum graduation size of 0.10 pound. Run tests for at least 300 lbs of emulsified warm mix asphalt additive.

Batch Mixing

If batch proportioning for RHMA-O with warm mix asphalt additive is used, comply with the following:

Proportion dry warm mix asphalt additives by weight. Weigh the additive at the warm mix asphalt production site
with a scale appropriate for the amount of additive weighed. If batches use dry warm mix additive weighing less
than 1 ton, use an automatic batch controller. Run tests for at least 100 pounds of dry warm mix asphalt additives.

2. Measure emulsified warm mix asphalt additive with a meter. If operating from 50 to 100 percent of production capacity, the difference between the indicated weight of emulsion delivered and the actual weight delivered must not exceed 1.0 percent of the actual weight for 3 individual runs. Weigh tests on a platform scale located at the proportioning plant. The platform scale's maximum capacity must not exceed 2.5 tons with a maximum graduation size of 0.10 pound. Run tests for at least 300 gallons of emulsified warm mix asphalt additive.

3. Proportioning for pre-blending the asphalt rubber binder and zeolite:

3.1 Weigh dry warm mix asphalt additives with a belt scale or loss in weight feeder. If operating from 30 to 100 percent of production capacity, the average difference between the indicated weight of material delivered and the actual weight delivered must not exceed 2.0 percent of the actual weight for 3 individual runs. For any of the 3 individual runs, the indicated weight of material delivered must not vary from the actual weight delivered by more than 3.0 percent of the actual weight. The platform scale's maximum capacity must not exceed 2.5 tons with a maximum graduation size of 0.10 pound. Each test run must be at least 100 pounds of warm mix asphalt additive.

3.2 The addition device will rest on (a smooth level surface) either concrete pads or steel plates. The steel plates

will be 1.5 inch thick and be no smaller than 20 inches width and height.

3.3 The asphalt rubber binder will be measured with a mass flow meter (micromotion). The accuracy of the addition device shall be such that, when operating between 30 and 100 percent of production capacity, the average difference between the indicated weight of material delivered and the actual weight of material delivered will not exceed 1.0 percent of the actual weight for 3 individual runs. For any of the 3 individual runs, the indicated weight of material delivered shall not vary from the actual weight delivered by more than 2.0 percent of the actual weight. Test duration will be determined by the size of the flowmeter, following the CT 109 specification.

Production and Placement

Produce an asphalt mixture within the temperature range of 275°F and 325 °F. For RHMA-O with WMA:

1. Only spread and compact if the atmospheric temperature is at least 50 °F and surface temperature is at least 55 °F.

2. Complete the 1st coverage using 2 rollers before the surface temperature drops below 260 °F.

3. Complete compaction before the surface temperature drops below 180°F.

4. If the atmospheric temperature is below 70 °F, cover loads in trucks with tarpaulins. The tarpaulins must completely cover the exposed load until the mixture is transferred to the paver's hopper or to the pavement surface.

Material Transfer Vehicle

A material transfer vehicle (MTV) must be used. The MTV must:

 Either receive HMA directly from the truck or use a pickup head to load it from a windrow that can be deposited on the roadway surface for a maximum of 100 feet in length.

2. Transfer HMA directly into the paver's receiving hopper or feed system

3. Remix the HMA, with augurs, before loading the paver

4. Have sufficient capacity to prevent stopping the paver

Vertical Joints

Before opening the lane to public traffic, pave shoulders and median borders adjacent to a lane being paved.

Place RHMA-O on adjacent traveled way lanes so that at the end of each work shift, the distance between the ends of RHMA-O layers on adjacent lanes is between 5 feet and 10 feet. Place additional RHMA-O along the transverse edge at each lane's end and along the exposed longitudinal edges between adjacent lanes. Hand rake and compact the additional RHMA-O to form temporary conforms. You may place Kraft paper, or another approved bond breaker, under the conform tapers to facilitate the taper removal when paving operations resume.

Conform Tapers

Place additional RHMA-O along the pavement's edge to conform to road connections and private drives. Hand-rake and compact the additional RHMA-O- to form a smooth conform taper.

Data Cores

Take data cores that include the completed HMA pavement, underlying base, and subbase material. Protect data cores and surrounding pavement from damage.

Take 4-inch or 6-inch diameter data cores:

1. At the beginning, end, and every 1/2 mile within the paving limits of each route on the project

2. After all paving is complete

3. From the center of the specified lane

On a 2-lane roadway, take data cores from either lane. On a 4-lane roadway, take data cores from each direction in the outermost lane. On a roadway with more than 4 lanes, take data cores from the median lane and the outermost lane in each direction.

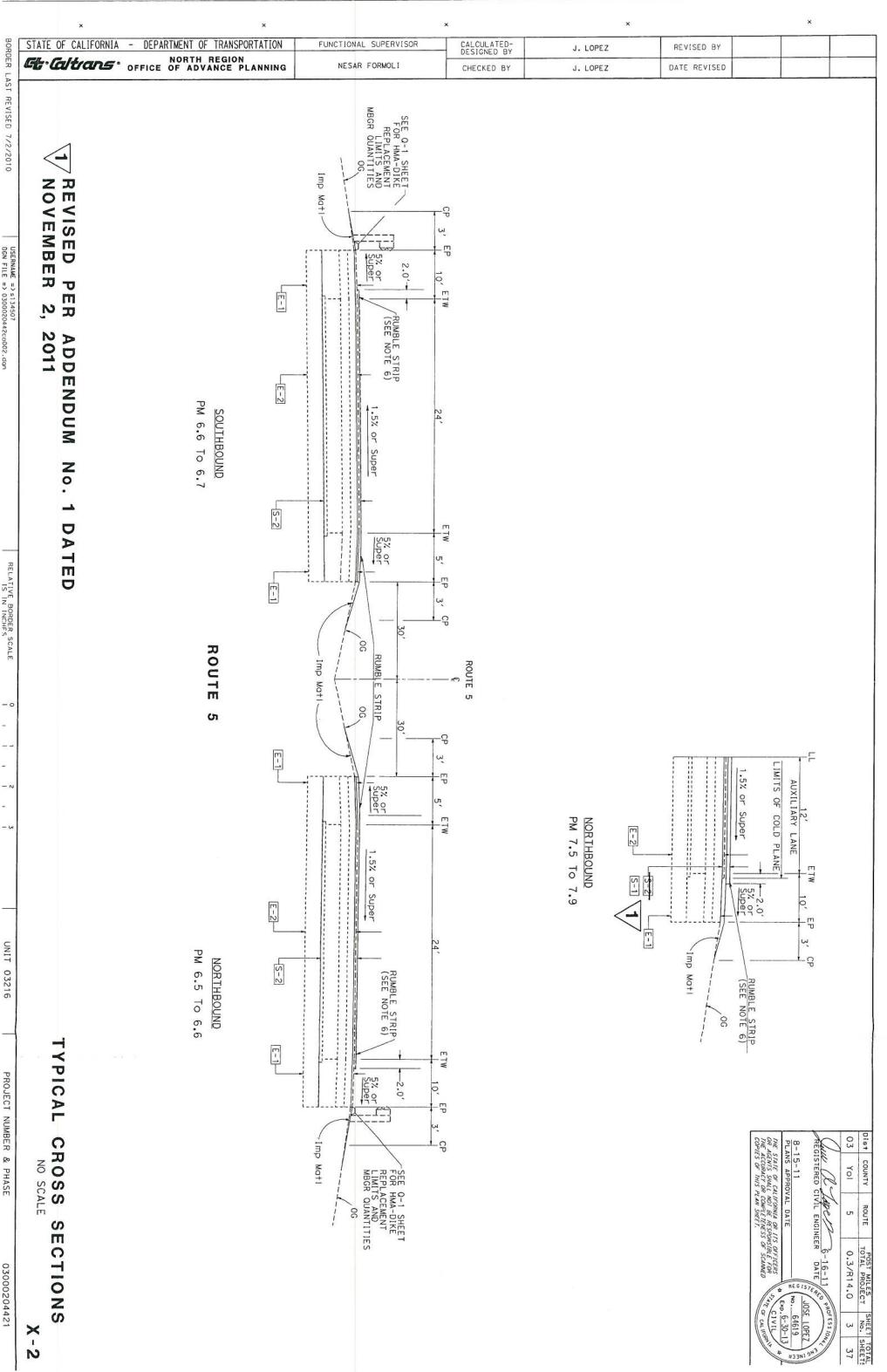
Each core must include the stabilized materials encountered. You may choose not to recover unstabilized material but you must identify the material. Unstabilized material includes:

- 1. Granular material
- 2. Crumbled or cracked stabilized material
- 3. Sandy or clayey soil

PAYMENT

The contract price paid per ton for rubberized hot mix asphalt (open graded) using warm mix asphalt technologies includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, including warm mix additives, prepaving conference, material transfer vehicle, technical representation and data collection and testing, and for doing all the work involved in constructing rubberized hot mix asphalt (open graded) with warm mix asphalt additives, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

The contract lump sum price paid for data core includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in data coring, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.



PROJECT NUMBER & PHASE

UNIT 03216

BORDER LAST REVISED 7/2/2010

RELATIVE BORDER SCALE

03000204421

X-2